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10/820,162	04/07/2004	Juha Tuominen	U 015141-1	7034

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Ladas & Parry
26 West 61 Street
New York, NY 10023

EXAMINER	
PYO, KEVIN K	

ART UNIT	PAPER NUMBER
2878	

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Please find below and/or attached an Office communication concerning this application or proceeding.

H'H

Office Action Summary	Application No.	Applicant(s)	
	10/820,162	TUOMINEN ET AL.	
	Examiner	Art Unit	
	Kevin Pyo	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13-23 and 25* is/are rejected.

7)☒ Claim(s) *12 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

1. Claims 9, 20 and 21 are objected to because of the following informalities:

In claim 9, line 8, "comprises" should be changed to --comprising--.

In claim 9, line 15, "are" should be changed to --is--.

In claim 20, line 8, "are" should be changed to --is--.

In claim 21, line 1, after "receiver", --comprising-- should be inserted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 8, 17, 18 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 8, 17 and 18, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 21, the phrases "the light source" of line 2 and "the power transmitter" of line 5 lacks a proper antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 8-11, 13, 14 and 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Tuominen (6,633,026).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 9, Tuominen shows in Figs.1, 6a and 6b the following elements of applicant's invention: a) a power transmitter (100; 600) comprising a light source (102, 104; 606, 618), means for directing (106, 108; 620) the light emitted by the light source in a desired direction, and control means (602, 616) for controlling the intensity of the light emitted by the light source in such a manner that the intensity is substantially less than the allowed maximum eye exposure (col.3, lines 22-23; the transmission power of the light source 104, 606 is so low that it will not cause danger to the eyes); and b) a power receiver (120; 640) comprising a photodetector (122, 124; 646, 660) for receiving and detecting the light emitted by the light source (102, 104; 606, 618) and for converting it into electric current, said photodetector being arranged to determine the integrity of the received light beam (col.4, lines 4-15), and

transmission means (128; 658) responsive to the determination of integrity, which are arranged to transmit a control signal to the power transmitter in response to finding the light beam intact (col.9, lines 10-16); whereby in response to receiving the control signal, the control means of the power transmitter is arranged to increase the intensity of the light transmitted by the light source of the power transmitter (col.8, lines 52-54; col.7, lines 27-31; in response to the received security link signal, the transmitter of Tuominen switches on a light source and begins to emit a light beam at a certain level, and therefore the intensity of the light emitted by the light source is increased going from zero level to a non-zero level).

Regarding claim 10, the limitation therein is disclosed in col.5, lines 24-57.

Regarding claim 11, Tuominen discloses that its power receiver may be a surveillance camera (col.9, lines 33-34) and pixels in a camera may constitute the recited photodetector matrix.

Regarding claims 13 and 14, the limitations therein are disclosed in col.5, lines 50-col.6, line 22.

Regarding claim 17, Tuominen discloses a low power radio transmitter as means for transmitting a control signal (col.5, lines 64-65).

Regarding claim 18, the limitation therein is disclosed in col.9, lines 15-21.

Regarding claim 19, Tuominen discloses the recited light source (col.4, lines 16-17).

Regarding clam 20, Tuominen shows in Figs.1 and 6a the following elements of applicant's invention: a light source (102, 104; 606, 618), means for directing (106, 108; 620) the light emitted by the light source in a desired direction, and control means (602, 616) for controlling the intensity of the light emitted by the light source in such a manner that the

intensity is substantially less than the allowed maximum eye exposure (col.3, lines 22-23; the transmission power of the light source 104, 606 is so low that it will not cause danger to the eyes), and a receiver (110; 622) for receiving a control signal transmitting by a power receiver (120; 640), the control signal indicating the integrity of the received emitted light beam, whereby in response to receiving the control signal, the control means (602, 616) of the power transmitter is arranged to increase the intensity of the light transmitted by the light source of the power transmitter (col.8, lines 52-54; col.7, lines 27-31; in response to the received security link signal, the transmitter of Tuominen switches on a light source and begins to emit a light beam at a certain level, and therefore the intensity of the light emitted by the light source is increased going from zero level to a non-zero level).

Regarding claim 21, as far as the claim is understood, Tuominen shows in Figs.1 and 6b the following elements of applicant's invention: a) a photodetector (122, 124; 646, 660) for receiving and detecting the light emitted by the light source (102, 104; 606, 618) and for converting it into electric current, said photodetector being arranged to determine the integrity of the received light beam (col.4, lines 4-15); and b) transmission means (128; 658) responsive to the determination of integrity, which are arranged to transmit a control signal to the power transmitter (100; 600) in response to finding the light beam intact (col.9, lines 10-16).

Regarding claims 1-5 and 8, the method steps therein are inherently disclosed by the device of Tuominen.

5. Claims 1, 4, 9, 13, 17, 18, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanaki (6,437,685).

Regarding claims 1 and 9, Hanaki shows in Figs.2 and 3 the following elements of applicant's invention: a) a power transmitter (1) comprising a light source (12), means for directing (14; col.4, lines 21-23) the light emitted by the light source in a desired direction, and control means (11) for controlling the intensity of the light emitted by the light source in such a manner that the intensity is substantially less than the allowed maximum eye exposure (the intensity of the light emitted by the light source of Hanaki should be low so that an eye of an operator who is using an electrical appliance of Hanaki will not be damaged by a high intensity light beam); and b) a power receiver (2) comprising a photodetector (32) for receiving and detecting the light emitted by the light source (12) and for converting it into electric current, said photodetector being arranged to determine the integrity of the received light beam (col.4, lines 57-60), and transmission means (34) responsive to the determination of integrity, which are arranged to transmit a control signal to the power transmitter in response to finding the light beam intact (col.4, lines 58-65); whereby in response to receiving the control signal, the control means of the power transmitter is arranged to increase the intensity of the light transmitted by the light source of the power transmitter (in response to a control signal received from a power receiver, the power transmitter of Hanaki begins to emit a light beam at a certain level, and therefore the intensity of the light emitted by the light source is increased going from zero level to a non-zero level).

Regarding claims 4 and 13, the limitations therein are shown in Figs.4a-4c.

Regarding claims 17 and 18, as far as the claim is understood, the limitations therein are shown in Figs.2 and 3.

Regarding claim 20, Hanaki shows in Fig.2 the following elements of applicant's invention: a light source (12), means for directing (14; col.4, lines 21-23) the light emitted by the light source in a desired direction, and control means (11) for controlling the intensity of the light emitted by the light source in such a manner that the intensity is substantially less than the allowed maximum eye exposure (the intensity of the light emitted by the light source of Hanaki should be low so that an eye of an operator who is using an electrical appliance of Hanaki will not be damaged by a high intensity light beam), and a receiver (an optical receiving portion of 14) for receiving a control signal transmitting by a power receiver (2), the control signal indicating the integrity of the received emitted light beam (col.4, lines 13-15), whereby in response to receiving the control signal, the control means (11, 13) of the power transmitter is arranged to increase the intensity of the light transmitted by the light source of the power transmitter (in response to a control signal received from a power receiver, the power transmitter of Hanaki begins to emit a light beam at a certain level, and therefore the intensity of the light emitted by the light source is increased going from zero level to a non-zero level).

Regarding claim 21, as far as the claim is understood, Hanaki shows in Fig.3 the following elements of applicant's invention: a) a photodetector (32) for receiving and detecting the light emitted by the light source (12) and for converting it into electric current, said photodetector being arranged to determine the integrity of the received light beam (col.4, lines 57-60); and b) transmission means (34) responsive to the determination of integrity, which are arranged to transmit a control signal to the power transmitter (1) in response to finding the light beam intact (col.4, lines 58-65).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 6, 7, 15 and 16 are rejected under 35 U.S.C. 103(a) as being obvious over Tuominen (6, 633,026).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claims 6 and 15, Tuominen discloses that its power transmitter determines the location coordinates of a power receiver (col.6, lines 19-20). Tuominen also discloses that its

power receiver comprising a light emitting diode operating in the infrared range (IR-LED). In view of determining the location of IR-LED of the power receiver, it would have been obvious to one of ordinary skill in the art to utilize a position sensing detector diode in the power transmitter in view of the desire to effectively determine the location of the power receiver comprising a IR-LED.

Regarding claims 7 and 16, the limitations therein are disclosed in col.8, lines 54-65.

8. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuominen (6,633,026) in view of Robinson (6,433,683).

Regarding claim 22, Tuominen differs from the claimed invention in that it does not specifically disclose that its power transmission system is utilized with the recited surveillance system. However, Robinson discloses a wireless surveillance system with two remote elements that communicate information using radio frequencies (abstract) and it would have been obvious to one of ordinary skill in the art to modify the device of Tuominen to utilize radio frequency communication in order to inexpensively communicate information between the remote elements.

Regarding claim 23, Tuominen discloses that its power receiver may be a surveillance camera (col.9, lines 33-34) and pixels in a camera may constitute the recited photodetector matrix.

Regarding clam 25, the specific type of transmission device utilized would have been obvious to one of ordinary skill in the art in view of meeting different design requirements and achieving the particular desired performance.

Allowable Subject Matter

9. Claims 12 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to disclose or make obvious a wireless power transmission system or a wireless surveillance system comprising, in addition to the other recited features of the claim, the limitation of "the photodetector matrix is a prismatic square matrix, the planes of which are set so that an incoming light beam is reflected back to its direction of incidence through reflection via at least two planes".

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is (571) 272-2445. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Pyo
Primary Examiner
Art Unit 2878

Pkk
2/5/06